

REMARKS

As a preliminary matter, Applicants traverse the outstanding Office Action as being further nonresponsive. Section 707.07(f) of the MPEP places a burden upon the Examiner, when repeating a previous rejection, to first answer all of the meritorious arguments presented by Applicants traversing that rejection. In the present case, however, the Examiner has not done so. The Examiner's discussion on the differences between "filtering," "passing," and "filtering out" different harmonics, fails to address the gist of the actual arguments presented by Applicants, namely, that none of the cited references teach or suggest the signal generator of the present invention that passes an output sine wave from a crystal oscillator having an oscillation frequency f through a filter equal to the oscillation frequency f in a center frequency f_0 . Accordingly, all previous arguments presented in the two previous Responses are incorporated by reference herein.

Contrary to the Examiner's assertions, patentability of the present claims is not based on whether a particular frequency is filtered "out" or "in," but instead on *what frequency is actually filtered*. In other words, none of the references teach a filter with the same frequency as the crystal oscillator. Also, as previously argued, the Benes reference (U.S. 4,817,430) even teaches away from such a device. Regardless of the semantic confusion regarding prepositions used in the previous arguments, the Examiner still has not cited to anywhere in the prior art that teaches these features of the present invention, as he is required to do under Section 2143.03 of the MPEP.

Regarding the Examiner's comments on his burden under Section 2143.03, Applicants have already provided the Examiner with details from the cited references themselves that show how these references fail to support his broad, conclusory assertion "that all the claim limitations are taught or suggested by the prior art." Applicants made specific meritorious arguments that the references fail to teach or suggest a signal generator with a filter equal to the oscillation frequency of a crystal oscillator. As discussed above, the Examiner has a burden to answer such arguments before merely repeating the rejection in a conclusory manner.

To establish a *prima facie* case of obviousness, Section 2143.03 (and the numerous court holdings that are codified by this Section) requires an objective showing on the record of where the prior art actually teaches or suggests each and every limitation of the present invention. Applicants have already demonstrated on the record how the references fail to meet this burden, and how they even teach away from the present invention. If the Examiner is unwilling or unable to answer on the record the details of this meritorious challenge to the *prima facie* case, he should withdraw the rejection. When there is no citation to specific teachings or suggestions in the art to support the rejection, the only evidence *on the record* to support the conclusory rejection is the Examiner's own personal assurances that such teachings or suggestions are present. The Examiner's personal opinion and experience, however, are not sufficient to form the basis of a *prima facie* case of obviousness. See In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

Applicants concede that some of Applicants' arguments may not have been best phrased as being "filtered out." However, as discussed above, this issue is irrelevant to the patentability of the present claims. None of the claims recite this language with which the Examiner takes issue. Applicants' arguments addressed a the generator that has a filter equal to, centered on, or set to the same oscillation frequency as the crystal oscillator, which is the actual claim language that the Examiner was required to consider. The Examiner though, does not appear to have fully considered this language. Accordingly, the rejection is further deficient on its face for at least these reasons.

The Examiner has not responded to Applicants' arguments that detailed how the Benes reference in particular teaches away from the present invention. Benes expressly teaches that the initial basic frequency of the oscillator is 6 MHz, but the harmonic filter 32 "must be designed for a frequency range of about 15 to 18 MHz." (Col 7, lines 44-46). Benes even further clarifies this point by declaring that the *center frequency* of its band filters is in the exact middle of this range, namely, 16.5 MHz. (Col. 7, lines 47-51). Benes therefore, unequivocally teaches that the filters have a frequency that is not equal to the frequency of the crystal oscillator. Benes thus specifically teaches away from clearly recited features of the present invention that have a filter equal to the frequency of the crystal oscillator.

Applicants do appreciate the Examiner's attempt to educate Applicants on the operation of band pass filters. Applicants further acknowledge that the Examiner is correct that Benes does teach to filter "out" the third harmonic of the spectrum that is output from

the crystal oscillator. Nevertheless, as discussed above, all of this discussion is irrelevant to the patentability of the present invention. The claims of the present invention do not address the third harmonic. The claims of the present invention instead affirmatively recite that the filter utilized with the crystal oscillator has the same frequency as the oscillator. The Examiner's discussion of the Malinowski reference is also irrelevant now, as it appears the Examiner has withdrawn the rejections that were in any way based on Malinowski. Neither of the only two obviousness rejections remaining in the outstanding Office Action cites Malinowski as a basis for the rejection. Applicants note that the Examiner's discussion of the Malinowski reference also focuses mainly on the irrelevant issue of whether a bandpass filter filters "out," or "about."

The Examiner incorrectly characterizes Applicants' arguments as "trying to make an argument that the Malinowski and Benes references are non-analogous." Applicants never made such an argument. Instead, Applicants argued that the Examiner's proposed combinations with either Benes or Malinowski were non-obvious. The previous obviousness rejections were based on proposed combinations of either three or five separate references. Applicants argued how several of these references were drawn to completely different devices and objectives, and how none of the references provided a clear teaching or suggestion to one skilled in the art to make the proposed combinations. Such a clear teaching or suggestion within the art for the proposed combinations is a requirement of the Examiner's *prima facie* case.

Even a *prima facie* case of obviousness, however, will be sufficiently rebutted upon a demonstration that it is non-obvious to combine so many references together to reach the present invention, regardless of whether the references may or may not be analogous. As discussed above, the Examiner still has the burden to answer the arguments that demonstrate nonobviousness before repeating the rejection. Addressing arguments that were not made does not satisfy this burden. Benes' system is designed for an entirely different purpose than the filter and oscillator of the present invention, and therefore it would not be obvious to one skilled in the art to attempt to modify Benes, as proposed by the Examiner, to reach the present invention.

Benes does not utilize a filter to solve the same problem that is solved by the present invention. The present invention utilizes a filter to realize a synchronous signal generator for outputting a sine wave having little or no distortion. (See page 4, lines 11-15 of the present Specification). Benes, however, utilizes a filter in a system to determine the thickness of varying coatings in a coating process. (See col. 1, lines 5-7). There is simply no teaching or suggestion in Benes (or the other references) to apply Benes' coating thickness system to the present invention, or to the other cited references, none of which deal with measuring coating thicknesses.

Benes utilizes a relatively broad harmonic filter (col. 7, lines 23-24), which filters out the third harmonic f_3 , which has the greatest amplitude by Fourier analysis (col. 7, lines 39-51). This kind of filter would not realize the low-distortion advantages of the present invention. The filter of the present invention is utilized for a synchronous signal

generator for outputting a sine wave having low distortion. The filter relatively increases the level of the fundamental component f_1 in a signal output from the oscillator compared with other harmonic components (f_2 , f_3 , etc.). There has been no citation to any teaching or suggestion from Benes, or from the other art of record, to justify how it would be obvious to devise the present invention from Benes, when Benes is drawn to such a significantly different purpose.


Applicants again therefore maintain that the Examiner has still not sufficiently identified the teachings and suggestions within the cited prior art that would direct one skilled in the art to combine each and all of the references as proposed by the Examiner. Section 2143.01 of the MPEP expressly states that the mere fact that references *can be combined or modified* is not sufficient to establish a *prima facie* case of obviousness. Similarly, the fact that the Examiner's proposed combination *may be within the capabilities of one skilled in the art* is also not sufficient to establish obviousness. The Examiner has the burden to establish where in the prior art is taught or suggested the motivation to combine each of the references together, and as proposed. In the present case, however, the Examiner has merely asserted that the references are "analogous," namely, that they can be combined or modified, and that it is within the capabilities of one skilled in the art to make such modifications. Even if properly supported, such assertions are not sufficient by themselves to establish the obviousness to combine each and every reference in the manner proposed. Accordingly, for at least these reasons as well, the rejection should be withdrawn.

For all of the foregoing reasons, Applicants submit that this Application, including claims 1-12, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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